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UTILITY PATENT APPLICATION **TRANSMITTAL**

Attorney Docket No. First Inventor or Application Identifier Jeffrey B. Sponaugle

Title M & A For Establishing a Voice Call By

An Electronic Mail Message

(Only for new nonprovisional applications under 37 C.F.R. § 1.53(b),

Express Mail Label No. EK803349145US

| | APPLICATION ELEMENTS apter 600 concerning utility patent application contents. | Assistant Commissioner for Patents ADDRESS TO: Box Patent Application Washington, DC 20231 | | |
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| 1 | ee Transmittal Form (e.g., PTO/SB/17) ubmit an original and a duplicate for fee processing) | 5. Microfiche Computer Program (Appendix) | | |
| 2. XX Sp | pecification [Total Pages 31] | Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary) | | |
| · · | referred arrangement set forth below) Descriptive title of the Invention | a. Computer Readable Copy | | |
| | Cross References to Related Applications | b. Paper Copy (identical to computer copy) | | |
| | Statement Regarding Fed sponsored R & D | c. Statement verifying identity of above copies | | |
| | Reference to Microfiche Appendix Background of the Invention | | | |
| | Brief Summary of the Invention | ACCOMPANYING APPLICATION PARTS | | |
| | Brief Description of the Drawings (if filed) | 7. Assignment Papers (cover sheet & document(s)) | | |
| | Detailed Description | 8. 37 C.F.R.§3.73(b) Statement Power of Attorney | | |
| - C | Claim(s) | 9. English Translation Document (if applicable) | | |
| | Abstract of the Disclosure | Information Disclosure Copies of IDS | | |
| 3. XX Dra | rawing(s) (35 U.S.C. 113) [Total Sheets 7] | 10. Statement (IDS)/PTO-1449 Citations | | |
| 4. Oath or [| Declaration (unsigned) _{Total Pages} 4 | 11. Preliminary Amendment | | |
| а. | Newly executed (original or copy) | 12. XX Return Receipt Postcard (MPEP 503) (Should be specifically itemized) | | |
| b. | Copy from a prior application (37 C.F.R. § 1.63 (for continuation/divisional with Box 16 completed) | * Small Entity Statement filed in prior application. | | |
| | DELETION OF INVENTOR(S) | Status still proper and desired | | |
| | Signed statement attached deleting | Certified Copy of Priority Document(s) | | |
| | inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b). | | | |
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| | ALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.27), EXCEPT ID IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.28). | | | |
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| Namo | Jason K. Klindtworth, Reg. N | o. 47,211 | | |
| Name | COLUMBIA IP LAW GROUP, LLC | | | |
| Address | 4900 SW Meadows Road | | | |
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| Country | Telephane | (503) 534–2800 Fax (503) 534–2804 | | |
| Name (i | Jason K. Klindtworth | Registration No. (Attorney/Agent) 47,211 | | |
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TOTAL AMOUNT OF PAYMENT

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| Application Number | Not yet assigned | נו |
| Filing Date | October 23, 2000 | |
| First Named Inventor | Jeffrey B. Sponaugle | |
| Examiner Name | | |
| Group / Art Unit | | |
| Attorney Docket No. | 51000.P023 | |

| METHOD OF PAYMENT (check one) | FEE CALCULATION (continued) | |
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| 1. The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to: | 3. ADDITIONAL FEES Large Entity Small Entity | |
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| Account Number | 105 130 205 65 Surcharge - late filing fee or oath | |
| Deposit Account | 127 50 227 25 Surcharge - late provisional filing fee or cover sheet. |] |
| Name | 139 130 139 130 Non-English specification | |
| Charge Any Additional Fee Required Under 37 CFR §§ 1.16 and 1.17 | 147 2,520 147 2,520 For filing a request for reexamination | _ |
| 2. Payment Enclosed: | 112 920* 112 920* Requesting publication of SIR prior to Examiner action | |
| Check Money Other | 113 1,840* 113 1,840* Requesting publication of SIR after Examiner action | 4 |
| FEE CALCULATION | 115 110 215 55 Extension for reply within first month | 4 |
| | 116 380 216 190 Extension for reply within second month | 4 |
| 1. BASIC FILING FEE Large Entity Small Entity | 117 870 217 435 Extension for reply within third month | 4 |
| Fee Fee Fee Fee Description | 118 1,360 218 680 Extension for reply within fourth month | 4 |
| Code (\$) Code (\$) Fee Paid | 128 1,850 228 925 Extension for reply within fifth month | 4 |
| 101 690 201 345 Utility filing fee 710.00 | 119 300 219 150 Notice of Appeal | _ |
| 106 310 206 155 Design filing fee | 120 300 220 150 Filing a brief in support of an appeal | _ |
| 107 480 207 240 Plant filing fee | 121 260 221 130 Request for oral hearing | 4 |
| 108 690 208 345 Reissue filing fee | 138 1,510 138 1,510 Petition to institute a public use proceeding | _ |
| 114 150 214 75 Provisional filing fee | 140 110 240 55 Petition to revive - unavoidable | |
| SUBTOTAL (1) (\$) 710.00 | 141 1,210 241 605 Petition to revive - unintentional | Ì |
| 2. EXTRA CLAIM FEES | 142 1,210 242 605 Utility issue fee (or reissue) | |
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| Total Claims 36 -20** = 16 × 18_00 = 288_0 | | 7 |
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| 104 260 204 130 Multiple dependent claim, if not paid | | |
| 109 78 209 39 ** Reissue independent claims over original patent | Other fee (specify) | |
| 110 18 210 9 ** Reissue claims in excess of 20 and over original patent | Other fee (specify) | |
| SUBTOTAL (2) (\$) 368.00 | Reduced by Basic Filing Fee Paid SUBTOTAL (3) (\$) | |
| SUBMITTED BY | Complete (if applicable) | _ |
| | Registration No. 47 211 Telephone (502) 524 290 | 0 |
| Name (PrintiType) Jason K. Klindtworth | (Attorney/Agent) 47,211 (Ob) 33, 334-280 | U |

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(Attorney/Agent)

Date

UNITED STATES PATENT APPLICATION

FOR

METHOD AND APPARATUS FOR ESTABLISHING A VOICE CALL BY WAY OF AN ELECTRONIC MAIL MESSAGE

INVENTORS:

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(503) 534-2800

EXPRESS MAIL LABEL NO. EK803349145US

METHOD AND APPARATUS FOR ESTABLISHING A VOICE CALL BY WAY OF AN **ELECTRONIC MAIL MESSAGE**

FIELD OF THE INVENTION

The invention relates generally to the field of telecommunications and, in particular to a method and apparatus for establishing a voice call by way of an electronic mail message.

BACKGROUND OF THE INVENTION

In recent years, information technology including personal computer, telecommunication, and television technologies have begun to converge, whereby clear demarcations that once separated the various technologies have blurred. This "convergence" may be attributed, at least in part, to the explosive growth of the Internet.

Internet based voice communication is one advance in the telecommunications industry that has been made possible through the growth of the Internet. For example, calls that were once required to be managed by the public switched telephone network (PSTN) that assigns a dedicated communication line or circuit for each user to complete a telephone call, may now be connected through the shared medium of the Internet by breaking the voice data into varying sized packages or "packets," and transmitting them over the shared medium of the Internet.

The Internet Protocol (IP) is a protocol utilized throughout the Internet to interleave and transmit data packets so as to best utilize the available bandwidth at any given time. Voice over IP (VoIP) is a term used to describe a set of services for

managing the delivery of voice information using the Internet protocol. Various software products on the market provide VoIP services that enable two parties (e.g., caller and callee) to communicate with each other through the Internet. In order to do so, however, each of the parties to the VoIP call are typically required to communicate through hardware utilizing compatible voice encoders or "CODECs." Although emerging standards such as the International Telecommunication Union's (ITU) H.323 standard attempts to alleviate the CODEC compatibility issue, the parties to the call are nonetheless each required to communicate through a computer system or appliance equipped to place and/or receive VoIP calls. Unfortunately, however, not everyone has access to such VoIP equipped hardware. In fact, given the wide availability of PSTN handsets and their associated ease of use, even those who have access to such VoIP equipped hardware may nonetheless prefer to communicate via the more commonplace PSTN handsets.

U.S. Patent number 6,026,087, titled "Method and Apparatus for Establishing a Voice Call to a PSTN Extension for a Networked Client Computer" (having a common assignee with the present application) addresses the need for bridging the Internet and packet based devices with conventional PSTN handsets. Accordingly, a user of a networked computer can place a voice call to a PSTN extension (equipped with merely a conventional handset) rather than being limited to placing a voice call to only VoIP equipped hardware. Although this goes a long way towards integrating the VoIP functionality of the Internet with the PSTN, further integration remains desirable.

SUMMARY OF THE INVENTION

A method and apparatus for establishing a voice call by way of an electronic mail (email) message is provided. According to one embodiment of the invention, a first party (i.e. offeror), generates or causes to be generated, an electronic token representing an offer to participate in a voice which is transmitted to an offeree party in association with an email message. Upon receiving the electronic token, the offeree has the option of accepting the offer by activating the electronic token. When the offeree activates the electronic token, a first voice call is established with the offeree and a second voice call is established with a destination party identified by the offeror. Once the two calls have been established, they are bridged together to place the offeree in voice communication with the destination party. In one embodiment, the destination party is the offeror.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention is illustrated by way of example, and not by way of limitation in the figures of the accompanying drawings in which like reference numerals refer to similar elements.

Figure 1 is a block diagram illustrating an exemplary communication system incorporating the teachings of the present invention.

Figure 2 is a flow diagram illustrating one embodiment of a method for establishing a voice communication session between two parties by way of an electronic mail message.

Figures 3(a-f) are graphical illustrations, each representing various data input dialogs presented to an offeror in association with generation of one or more the tokens according to one embodiment of the present invention.

Figure 4 is a graphical representation illustrating one embodiment of how an electronic token generated in accordance with the teachings of the present invention, may be displayed in association with an electronic mail message.

Figure 5 is a graphical representation illustrating one embodiment of how a received electronic mail message may be displayed in accordance with the teachings of the present invention.

Figure 6 illustrates an example computer system suitable for use as a web server and/or one or more of client computers incorporating the teachings of the present invention.

Figure 7 illustrates two exemplary XML data structures each representing an electronic token according to one embodiment of the present invention.

DETAILED DESCRIPTION

A method and apparatus for establishing a voice call by way of an electronic mail message is disclosed herein. As will be described in further detail below, a first party (i.e. offeror), generates or causes to be generated, an electronic token representing an offer to an eventual offeree to participate in a voice call. According to one embodiment of the invention, the offeror transmits the electronic token to an offeree in association with an email message. Upon receiving the electronic token, the offeree has the option of accepting the offer by activating the electronic token. According to one embodiment of the invention, when the offeree activates the electronic token, a first voice call is established with the offeree and a second voice call is established with an identified destination party. Once the two calls have been established, they are bridged together to place the offeree in voice communication with the destination party. In one embodiment, the destination party is the offeror.

In the following description, for purposes of explanation, specific numbers, materials and configurations are set forth in order to provide a thorough understanding of the invention. It will be apparent, however, to one skilled in the art that the invention may be practiced without these specific details. In some instances, structures and devices are shown in block diagram form in order to avoid obscuring the invention. In other instances, well known features are omitted or simplified in order not to obscure the present invention. For ease of understanding, certain method steps are delineated as separate steps, however, these separately delineated steps should not be construed as necessarily order dependent in their performance. Furthermore, reference in the

specification to "one embodiment" or "an embodiment" means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the invention. The appearances of the phrase "in one embodiment" in various places in the specification are not necessarily all referring to the same embodiment.

In Figure 1, a block diagram is presented illustrating an exemplary communication system 100 incorporating the teachings of the present invention. While the present invention will be described in the context of this exemplary communication system, based on the descriptions to follow, those skilled in the art will appreciate that the present invention is not limited to this embodiment. Referring now to Figure 1, client computers 102, 108 and 116, handsets 142 and 117, web server 128, and bridgeports 162 and 165 are communicatively coupled to each other by way of PSTN 140 and Internet 150 as shown.

Except for the teachings of the present invention (to be more fully described below), client computers 102, 108 and 116 are intended to represent a broad category of Internet telephony enabled computer systems known in the art. Figure 6 illustrates an example computer system suitable for use as one or more of client computers 102, 108 and 116 and/or web server 128. As shown, system 600 includes one or more processors 602, such as a PENTIUM™ processor manufactured by Intel Corporation of Santa Clara, California; System memory 606, including both operating system 615, such as WINDOWS™ 95, 98, or 2000 with internetworking communication and socket

services, and one or more applications 616; Mass storage devices 607, such as a diskette drive, hard drive, CDROM and so forth; GPIO 608 for interfacing with I/O devices such as a keyboard and cursor control devices, and for inputting, digitizing and compressing outbound audio, and for decompressing and rendering inbound audio; and Communication interfaces 612, such as MODEMs, network interface cards, and so forth for sending and receiving various data packets (including audio data packets) in accordance with certain standard communication protocols. The elements of system 600 are coupled to each other via system bus 614, which may represent multiple buses bridged by one or more bus bridges (not shown). Each of the elements of system 600 performs its conventional functions known in the art. In particular, system memory 604 and mass storage 606 are employed to store a working copy and a permanent copy of the programming instructions implementing the token generation and/or call placement services of the present invention. Except for the teachings of the present invention, the constitution of the elements shown in Figure 6 is known, and accordingly will not be further described.

As illustrated in **Figure 1**, client computer **102** is coupled to ISP **112** through PSTN extension **104**, communication line **106**, PSTN **140**, communication line **115**, and PSTN extension **113**. In turn, ISP **112** is coupled to Internet **150** by direct connection **114**. Client computer **102** is equipped to communicate with ISP **112** through, for example, a modulation/demodulation (MODEM) device (not shown) coupled to PSTN extension **104**, while client **108** is equipped with a network interface to communicate with ISP **112** through network connection **110**. Rather than being connected to ISP

112, client computer 116 is directly coupled to Internet 150 using direct connection 118. Each of client computers 102, 108 and 116 represent a general purpose computer equipped to communicate with Internet 150 accordingly. It should be noted, however, that the various connections between client computers 102, 108, and 116, and PSTN 140 and Internet 150 described above, are merely illustrative and may vary from that which is described. For example, instead of being directly coupled to Internet 150, client computer 116 may be connected to Internet 150 through ISP 112 without departing from the spirit and scope of the invention.

Handsets 142 and 117 are intended to represent a broad category of conventional telephone handsets known in the art, including but not limited to desktop handsets, cordless handsets and wireless handsets. Handset 142 is coupled to PSTN 140 through PSTN extension 143 and communication line 144, while handset 117 is coupled to PSTN 140 through PSTN extension 119 and communication line 121.

Communication lines 106, 144, 115, and 121 may simply be plain old telephone service (POTS) communication lines, although other types of communication lines may be used. For example, in the case of communication line 106, it may be an integrated service digital network (ISDN) line, whereas in the case of communication line 115, it may be a T1 (1.533 Mbps) or an E1 (2.0488 Mbps) trunk line. Each of communication lines 144 and 121 may be a wireless cellular connection, a Personal Communication Services (PCS) connection, and the like.

PSTN 140 includes a number of Service Switching Points (SSP), Signal Transfer Points (STP), and Service Control Points (SCP) coupled to each other (not shown). PSTN extension 104 is coupled through communication line 106 to a "local" SSP, which in turn is coupled to a number of other "local" PSTN extensions, including for example, PSTN extension 113 if ISP 112 is a "local" ISP served by the same SSP. In addition, the "local" SSP is also coupled to an associated STP, which in turn is coupled to other "remote" SSPs. Each of the "remote" SSPs is coupled to a number of "remote" PSTN extensions, including for example, extension 119 if handset 117 is a "remote" handset served by a "remote" SSP. As is well known in the art, Internet 150 includes a number of networks interconnected by routers, interconnecting the various client computers, web servers and bridgeports together.

Bridgeports 162 and 165 are coupled to Internet 150 through connections 164 and 167 respectively, and to PSTN 140 through communication lines 163 and 166 respectively. Each of bridgeports 162 and 165 represent a server to determine an appropriate destination PSTN extension, such as the PSTN extension of telephone handset 117 for example, as well as an appropriate one of the community of Internet/PSTN changeover servers (e.g., bridgeports 162 and 165) to place a voice call to a PSTN extension and facilitate the voice call between a user of client computer 102 or 108, for example, and the user of a PSTN endpoint, such as handset 117. In one embodiment, bridgeports 162 and 165 facilitate establishment of a voice call between two PSTN extensions in response to an offeree activating the electronic token of the present invention. In an alternative embodiment, in addition to facilitating establishment

of a voice call between two PSTN extensions, at least one of bridgeports **162** and **165** additionally operate to generate the electronic token of the present invention, i.e. serving also as web server **128**. Further details regarding the functionality of bridgeports **162** and **165** may be found in U.S. patent number 5,889,774, titled "Method and Apparatus for Selecting an Internet/PSTN Changeover Server for a Packet Based Phone Call" (having a common assignee with the present application), which is hereby incorporated by reference.

Web server 128 is coupled to Internet 150 through connection 130, but may also be coupled to PSTN 140 by way of additional connections (not illustrated). In one embodiment, web server 128 is a corporate presence web server equipped to generate the electronic token of the present invention. In one embodiment, web server 128 generates the electronic token based at least in part upon data provided to web server 128 by, for example, client computer 102. In an alternative embodiment, in addition to generating the electronic token of the present invention, web server 128 further facilitates establishment of a voice call between two PSTN extensions in response to an offeree activating the electronic token, i.e. serving also as one of the bridgeports. For the purposes of this disclosure, any client that generates the electronic token of the present invention, or causes such a token to be generated, will be referred to as an offeror, whereas any client that receives the electronic token representing an offer to participate in a voice call will be referred to as an offeree.

In one embodiment, web server 128 generates the electronic token in association with a contractual relationship previously established between the user of client computer 102 and the third party business entity that owns and/or operates web server 128. Depending upon the contractual relationship that may exist between the third party operator of web server 128 and an offeror, such as the user of client computer 102 for example, web server 128 may provide the token generation and call connection services of the present invention to the offeror in exchange for payment of a fee to the operator of web server 128 by the offeror. In one embodiment of the invention, the offeror is charged a subscription-based fee, whereby the offeror may make unlimited use of the services provided by the third party within a specified time period. In an alternative embodiment, the offeror is charged a "per use" fee, whereby the offeror is charged a fee each time the offeror utilizes the third party services of the present invention.

For example, assume the user of client computer 102 has entered into a subscription based contractual relationship with a third party business entity that owns and operates web server 128. In exchange for paying a determined sum of money to the third party, the user of client computer 102 is permitted to cause web server 128 to generate an unlimited number of electronic tokens, each representing an offer to participate in a voice call. Further assume, as described earlier, that client computer 102 is communicatively coupled to web server 128 through PSTN 140, ISP 112 and Internet 150. In order to cause web server 128 to generate an electronic token representing an offer to participate in a voice call, client computer 102 would first

establish a communication session with web server 128 using, for example, a predetermined username and password. Once web server 128 has authenticated the identity of client computer 102, client computer 102 is provided access to standard and/or custom electronic token generation web pages of web server 128. In one embodiment, client computer 102 is presented with web pages including user-specific data such as user account information, billing information, and personal address book information, for example.

Each electronic token may contain various amounts of contact information. In one embodiment, the electronic token is self-describing in that it has encoded within it, all contact information necessary to facilitate a call between two parties, such as a caller (i.e. offeree) and a callee (i.e. destination party). Such contact information may include PSTN identifiers and/or IP addresses of the caller, the callee, and the bridgeport used to bridge the two calls. In the case of a self-describing electronic token, the bridgeport need not be notified of the electronic token's existence except upon the electronic token becoming activated. In an alternative embodiment, the electronic token has encoded within itself less than all necessary contact information. For example, in a minimal implementation, the electronic token may only include a bridgeport address and a call identifier identifying the call to be established. The bridgeport, whose address is encoded within the electronic token, stores the remaining contact information in association with the call identifier. When the electronic token is activated, the identified bridgeport is contacted and the bridgeport performs a lookup to correlate the stored contact information with the call identifier. By not including all contact information within

the electronic token, the token may be used for anonymous communication. In one embodiment of the invention, the electronic token is implemented as an extended markup language (XML) data structure, however, the electronic token may also be implemented as a hypertext markup language (HTML) data structure, and a standard generalized markup language (SGML) data structure. In other embodiments, other programming languages may be used. **Figure 7** illustrates two exemplary XML data structures each representing an electronic token according to one embodiment of the present invention.

Figure 2 is a flow diagram illustrating one embodiment of a method for establishing a voice communication session between two parties by way of an electronic token of the present invention. In accordance with illustrated embodiment, an offeror (i.e., client computer 102) causes web server 128 to generate an electronic token representing an offer to participate in a voice call (block 202). In an alternative embodiment, client 102 includes programming instructions that when executed, cause client computer 102 to generate the electronic token. Once the token representing the offer to participate in a voice call has been generated, the offeror such as client computer 102 transmits the generated token to an offeree such as client computer 116, in association with an electronic mail message (block 204). Upon receiving the electronic token from the offeror (block 206), the offeree activates the token by, for example, selecting a graphical icon representing the token with a user input device such as a mouse (block 208). Upon activation of the electronic token, a bridgeport designated by the electronic token is contacted. In one embodiment, the contacted

bridgeport places a first voice call to the designated offeree (block 210), and places a second voice call to the designated destination party (block 212). In an alternative embodiment, as described in U.S. patent 5,889,774 incorporated by reference above, the contacted bridgeport is one of a community of bridgeports (i.e. bridgeports 162 and 165) that determine among themselves how best to complete the first and second calls. Once the respective voice calls have been placed to the designated offeree and destination party, the calls are bridged by, for example at least one of bridgeports 162 and 165, so as to place the designated offeree and destination party in voice communication with each other (block 214). In one embodiment, the designated party is the offeror, however, the offeror need not necessarily be the destination party.

For example, a mother and father could generate or cause to have generated an electronic token that they would transmit in association with an electronic mail message to their child who is away at college. Upon receiving the electronic token, either embedded within or attached to an email message from the parents, the child could activate the token by, for example, selecting a graphical representation of the token with a computer mouse. Upon activating the token, a first voice call would be placed from a bridgeport (e.g., bridgeport 162 and/or 165) to the child, and a second voice call would be placed from a bridgeport (e.g., bridgeport 162 and/or 165) to the parents.

Thereafter, the two calls would be bridged to place the parents and the child in voice communication with one another.

In accordance with one embodiment of the invention, the electronic token is generated based at least in part upon data supplied by the offeror. **Figures 3(a-f)** are graphical illustrations, each representing various data input dialogs presented to an offeror in association with generation of one or more the tokens according to one embodiment of the present invention. The dialogs may be generated by a web server, such as web server **128**, or be generated by a local application executing on a client computer, such as client computer **102**. If a web server generates the dialogs, the dialogs may be displayed as part of one or more web pages transmitted to the offeror via the hypertext transfer protocol (HTTP), for example. If the dialogs are generated by a locally executing application, however, the dialogs may appear as one or more windows upon the offeror's desktop and may be accessible to the offeror through one or more menu selections or buttons upon the offeror's desktop.

Figure 3(a) represents one embodiment of a "call-type" data input dialog in which an offeror may select the type of voice call to be placed upon activation of the electronic token by an offeree. According to the illustrated embodiment, an offeror may choose to have the electronic token represent a VoIP-to-VoIP call, a VoIP-to-PSTN call, a PSTN-to-VoIP call, or a PSTN-to-PSTN call. By selecting the VoIP-to-VoIP call option, for example, the offeror indicates that VoIP based calls should be placed to both the offeree and the destination party, whereas by selecting the VoIP-to-PSTN call option, the offeror indicates that a VoIP based call should be placed to the offeree and a PSTN based call should be placed to the OFF call option places a first PSTN based call to the offeree and a second VoIP based call to the

destination party, whereas the PSTN-to-PSTN call option places first and second PSTN based calls to both the offeree and the destination party. In the illustrated embodiment, each of the call selections correspond to a check box, however, radio buttons, image maps and other graphical and text based selection methods known in the art may likewise be used.

Figures 3(b-e) each represent an embodiment of a data input dialog for an offeror to designate an offeree and a destination party to be placed in voice communication with each other. In each of Figures 3(b-e) the offeror is presented with a first drop-down selection list for designating an offeree and a second drop-down selection list for designating a destination party. Although drop-down lists are shown, other data entry techniques known in the art may be utilized. Depending upon the type of call selected (e.g. through the dialog of Figure 3a), the offeror may designate an offeree and a destination party by name, IP address, and/or PSTN extension. For example, in Figure 3b, the offeree is designated by IP address, whereas in Figure 3e, the offeree is designated by a PSTN identifier (i.e. telephone number). Some or all of the designation information, such as destination party name, IP address, and phone number may be retained in and accessed from a private/public address book of the offeror client.

Figure 3f represents one embodiment of a "billing" data input dialog in which an offeror may enter billing-specific data to facilitate payment of a fee to a third party. The offeror may, for example, select to pay for the services provided by the third party by

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way a credit card, or the offeror may choose to have the fee billed the offeror's preexisting account. If the offeror selects to pay using a credit card, the offeror's ability to
pay for such services is verified by an independent credit agency prior to generation of
the token or call placement. In one embodiment, the offeror may choose to have the
cost of the electronic token generation and/or call placement services billed to the
offeree. Conceptually, this may function much like a "1-900" number, wherein a caller
pays a fee to a service provider in order to receive some phone-based service. In this
example, the offeror would function as both the service provider and the destination
party. In one embodiment, the token is distributed to the offeree by way of solicited or
unsolicited email from an advertising or telemarketing offeror. Upon activating the
electronic token, the offeree may be presented with various billing options, such as
those illustrated in **Figure 3f**.

As alluded to previously, the electronic token generation and call placement services of the present invention may also be used to provide anonymous voice communication between an offeree and a destination party, wherein neither of the parties to the call have knowledge of the other's identity. For example, an Internet dating service could provide the electronic token generation service of the present invention. A user of the dating service would log into a web server, such as web server 128, and browse through one or more web pages linked to a database to provide the user with various levels of information related to individuals the user may wish to date. Once the user selects one of the potential candidates from the database, web server 128 would generate the electronic token using obfuscated or encrypted code in place of

each user's personal contact information, such as PSTN extension or IP number for example. The dating service would then email the generated electronic token to the selected offeree.

Once the offeree receives the electronic token representing an offer to participate in a voice call with the offeror, the offeree may activate the token to be placed in voice communication with the offeror. In one embodiment, activating the electronic token causes an HTTP post to be transmitted to a remote server, such as web server 128 or bridgeport 162 or 167, which recognizes this as a token activation by the offeree. The remote server then performs a lookup in a database to correlate the contact information with the appropriate PSTN and/or IP connection information. In one embodiment, the remote server (e.g., web server 128) uses this connection information to place the offeree and destination party in voice communication with one another, whereas in another embodiment, remote server forwards this connection information to another server (e.g., bridgeports 162 and 165) to place the offeree and destination party in voice communication with one another. Nevertheless, the identity of the offeree and the offeror/destination party are not revealed to either party.

Figure 4 is a graphical representation illustrating on embodiment of an email application in accordance with the teachings of the present invention. Email application 400 is shown including window title bar 402, window menu bar 404, action buttons 406, email message 408, and offer icon 410. Email application 400 represents any of the various electronic mail applications known in the art including, but not limited to Outlook,

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York, whereas email message **408** represents a text-based message generated by email application **400**. Alternatively, email message **408** may be generated by a web-based email account accessed through a generic web-browser.

Except for the teachings of the present invention, window title bar 402, window menu bar 404, and action buttons 406 are WINDOWS™ operating system features known in the art. In one embodiment of the invention, email application 400 includes one or more application specific menu bar entries, and/or one or more application specific action buttons, to facilitate generation of the electronic token. For example, selecting "call-me" menu entry 412, or activating "call-me" button 413 may cause one or more data input dialogs, such as those described above with respect to Figures 3(a-f), to be displayed. Additional ones of action buttons 406 may provide further functionality with respect to the electronic token generation and call placement services of the present invention. For example, when activated, address button 414 causes an address book to be displayed on the desktop. In one embodiment, the address book is stored locally on the client computer, whereas in an alternative embodiment, the address book is stored on a remote server, such as web server 128. In one embodiment, address data and contact information displayed in association with action buttons 406 and/or menu bar 404 is used in the generation of the electronic token of the present invention.

Email application **400** also includes email message **408** and offer icon **410**.

Email message **408** represents an electronic mail message including address information to route email message **408** to its designated destination as well as message text. Offer icon **410** is a graphical representation of an offer to participate in a voice call that has been attached to email message **408** by, for example, an offeror, such as the mother and father of the previous example. In an alternative embodiment, offer icon **410** is a text-based representation, such as a uniform resource locater (URL), rather than a graphical representation.

Figure 5 is a graphical representation illustrating one embodiment of how a received electronic mail message may be displayed in accordance with the teachings of the present invention. Email message 500 is shown including window title bar 502, window menu bar 504, action buttons 506, message body 508, and offer icon 510. Except for the teachings of the present invention, window title bar 302, and window menu bar 304 are features of the WINDOWS™ operating system. Action buttons 506 represent graphical images that are each linked to a generic email feature or function depending upon the specific email application utilized. In one embodiment, action buttons 506 include a button that when selected by a user, cause one or more data input dialogs to be presented, such as those described above with respect to Figures 3(a-f).

In the foregoing specification, the invention has been described with reference to specific embodiments thereof. It will, however, be evident that various modifications

and changes can be made thereto without departing from the broader spirit and scope of the invention. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

CLAIMS

What is claimed is:

1. A computer system comprising:

a storage medium having stored therein a plurality of programming instructions to implement a set of communication services on the computer system for generating on behalf of an offeror client, an electronic token representing an offer to participate in a voice call with a destination party designated by the offeror client, the electronic token to be transmitted by the offeror client in association with an electronic mail message to an offeree, services for receiving on behalf of the offeror client, through a data network link, a notification from the offeree denoting the offeree's acceptance of the offeror client's offer, and services for causing a voice call to be established between the destination party designated by the offeror client and the offeree in response to the offeree's acceptance of the offeror client's offer; and

an execution unit coupled to the storage medium for executing the plurality of programming instructions.

- 2. The computer system of claim 1, wherein the offeree accepts the offeror client's offer by activating the electronic token displayed on the offeree's computer system.
- 3. The computer system of claim 2, wherein activating the electronic token comprises selecting the electronic token with a user input device.

- 4. The computer system of claim 2, wherein the electronic token comprises a graphical icon.
- 5. The computer system of claim 2, wherein the electronic token comprises an URL.
- 6. The computer system of claim 1, wherein the voice call comprises at least one of a circuit switched call and a packet based call.
- 7. The computer system of claim 1, wherein the services for causing the voice call to be established between the destination party designated by the offeror client and the offeree, comprise services for causing a first voice call to be established with the offeree, services for causing a second voice call to be established with the destination party designated by the offeror client, and services for causing the first and second voice calls to be bridged to place the offeree and the destination party designated by offeror client in voice communication with each other.
- 8. The computer system of claim 7, wherein the destination party designated by the offeror client is the offeror client.
- 9. The computer system of claim 7, wherein the first and second voice calls each comprise a circuit switched call.

- 10. The computer system of claim 7, wherein the first voice call comprises a circuit switched call and the second voice call comprises a packet based call.
- 11. The computer system of claim 7, wherein the first voice call comprises a packet based call and the second voice call comprises a circuit switched call.
- 12. The computer system of claim 7, wherein the first and second voice calls each comprise a packet based call.
- 13. The computer system of claim 7, wherein the electronic token is generated on behalf of the offeror client based at least in part upon data provided to the computer system be the offeror client, the data associated with at least one of a PSTN extension corresponding to the destination party designated by the offeror client and a PSTN extension corresponding to the offeree.
- 14. The computer system of claim 13, wherein the PSTN extension corresponding to the offeror client is obscured to prevent the offeree from identifying the PSTN extension associated with the destination party designated by the offeror client.
- 15. The computer system of claim 7, further comprising programming instructions to implement services for receiving payment information from the offeror client in association with at least one of the first and second calls, and services for verifying the

ability of the offeror client to pay an indicated amount, prior to causing the first and second voice calls to be bridged.

16. A method comprising:

transmitting by an offeror party in association with an electronic mail message, an electronic token representing an offer to participate in a voice call with a destination party;

receiving by an offeree party, the electronic token representing the offer to participate in the voice call with the destination party; and

bridging the voice call between the offeree party and the destination party, based at least in part upon the offeree party accepting the offer to participate in the voice call.

- 17. The method of claim 16, wherein the offeree party accepts the offer to participate in the voice call by activating the electronic token representing the offer.
- 18. The method of claim 17, wherein activating the electronic token includes selecting the electronic token with a user input device.
- 19. The method of claim 17, wherein the electronic token comprises a graphical icon.
- 20. The method of claim 17, wherein the electronic token comprises an URL.
- 21. The method of claim 16, wherein the destination party is the offeror party.

- 22. The method of claim 16, wherein the voice call comprises at least one of a circuit switched call and a packet based call.
- 23. The method of claim 22, wherein bridging the voice call further comprises: establishing a first PSTN call with the offeree; establishing a second PSTN call with the destination party; and bridging the first and the second PSTN calls.
- 24. The method of claim 22, wherein bridging the voice call further comprises: establishing a first PSTN call with the offeree; establishing a second VIOP call with the destination party; and bridging the first PSTN call and the second VIOP call.
- 25. The method of claim 22, wherein bridging the voice call further comprises: establishing a first VIOP call with the offeree; establishing a second PSTN call with the destination party; and bridging the first VIOP call and the second PSTN call.
- 26. The method of claim 22, wherein bridging the voice call further comprises: establishing a first VIOP call with the offeree; establishing a second VIOP call with the destination party; and bridging the first and the second VIOP calls.

- 27. The method of claim 16, wherein the electronic token is generated by a third party based at least in part upon data provided to the third party by the offeror party in association with a contractual relationship previously established between the third party and the offeror party.
- 28. The method of claim 27, wherein the data provided to the third party by the offeror party includes a first PSTN extension corresponding to the offeree party and a second PSTN extension corresponding to the destination party.
- 29. The method of claim 28, wherein the second PSTN extension is obscured to prevent the offeree party from identifying the second PSTN extension.
- 30. The method of claim 27, wherein the data provided to the third party includes billing information.
- 31. The method of claim 30, wherein the voice call is bridged only after payment verification is received by the third party from an independent party assuring that the offeror party will pay for the cost of the call.
- 32. A computer system comprising:

a storage medium having stored therein a plurality of programming instructions to implement a set of communication services on the computer system for receiving on

behalf of an offeror client, through a data network link, a notification from an offeree denoting the offeree's acceptance of the offeror client's offer to participate in a voice call with a designated destination party, the offer communicated to the offeree in association with an electronic mail message, and for causing the voice call to be established between the designated destination party and the offeree in response to the offeree's acceptance of the offeror client's offer; and

an execution unit coupled to the storage medium for executing the plurality of programming instructions.

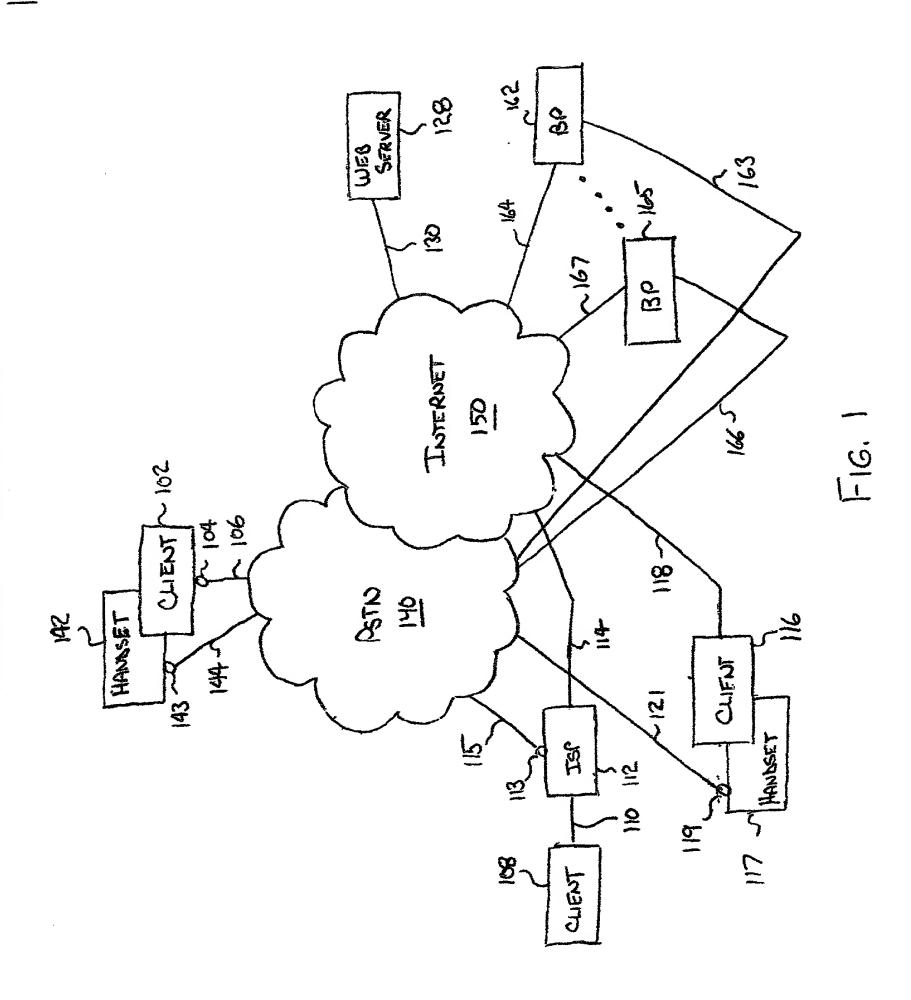
- 33. The computer system of claim 32, wherein destination party is designated by the offeror.
- 34. The computer system of claim 32, wherein the offeree party accepts the offer to participate in the voice call by activating the electronic token representing the offer.
- 35. The computer system of claim 32, wherein the services for causing the voice call to be established between the designated destination party and the offeree, comprise services for causing a first voice call to be established with the offeree, for causing a second voice call to be established with the designated destination party, and for causing the first and second voice calls to be bridged to place the offeree and the designated destination party in voice communication with each other.
- 36. A computer system comprising:

a storage medium having stored therein a plurality of programming instructions to implement a set of communication services on the computer system for generating on behalf of an offeror client, an electronic token representing an offer to participate in a voice call with a designated destination party, the electronic token to be transmitted to an offeree in association with an electronic mail message; and

an execution unit coupled to the storage medium for executing the plurality of programming instructions.

<u>ABSTRACT</u>

A method and apparatus for establishing a voice call by way of an electronic mail (email) message is provided. According to one embodiment of the invention, a first party (i.e. offeror), generates or causes to be generated, an electronic token representing an offer to participate in a voice which is transmitted to an offeree party in association with an email message. Upon receiving the electronic token, the offeree has the option of accepting the offer by activating the electronic token. When the offeree activates the electronic token, a first voice call is established with the offeree and a second voice call is established with a destination party identified by the offeror. Once the two calls have been established, they are bridged together to place the offeree in voice communication with the destination party. In one embodiment, the destination party is the offeror.



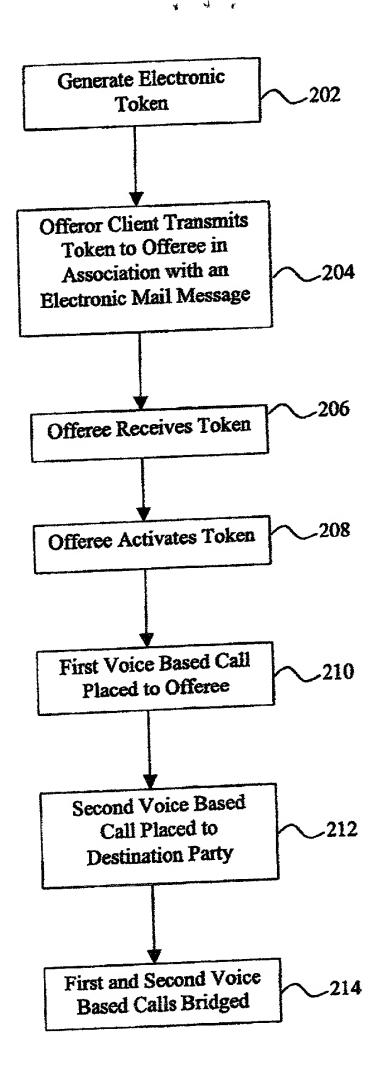


FIG. 2

| | CALL TYPE | X |
|-----------|--|---|
| Fig. 3(a) | SELECT TYPE OF VOICE CALL: VOIP TO VOIP VOIP TO PSTN PSTN TO VOIP PSTN TO PSTN CONTINUE | |

F16. 36)

CALING INFO (VOIP 40 VOIP)

DESIGNATE OFFEREE

128.256.1.2

DESIGNATE DESTINATION PARTY

JOE SMITH

Fig 36)

CALLING INFO (VOIP to PSIN)

DESIGNATE OFFEREE

JOE SMITH

DESIGNATE DESTINATION PARTY

1-800-555-1234 4

ز نہر ً .

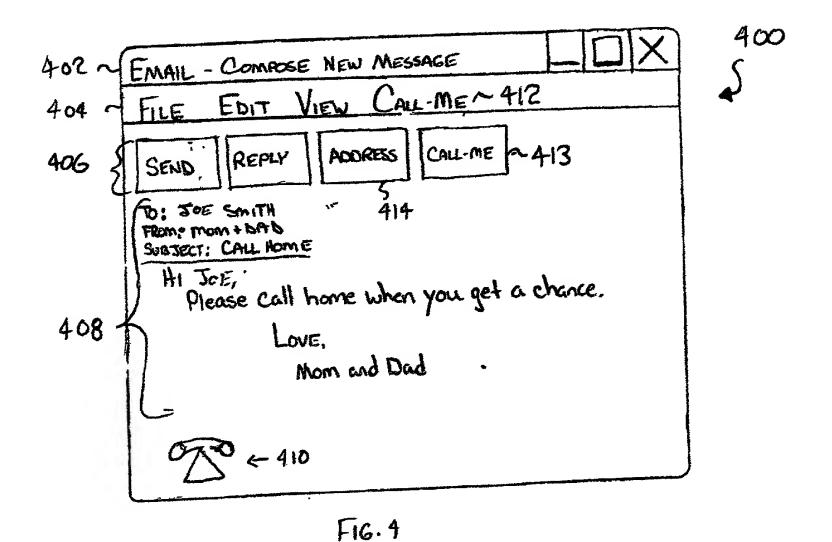
| | CALLING INFO (PSTN & VOIP) | X |
|----------|-----------------------------|---|
| | DESIGNATE OFFEREE | |
| T: 2(1) | JOE SMITH 4 | • |
| Fig. 30) | DESIGNATE DESTINATION PARTY | |
| | SAM JONES 4 | , |
| | | |

Fig. 364

| CALLING INFO (PSTN & PSTN) | |
|-----------------------------|--|
| DESIGNATE OFFEREE | |
| 408 - 555 - 6789 | |
| DESIGNATE DESTINATION PARTY | |
| 503-555-2468 | |

Fig. 3(9)

| BILLING INFO | X |
|---|---|
| SELECT PAYMENT METHOD BILL TO CREDIT CARD BILL TO ACCOUNT | |
| ENTER USER NAME | |
| ENTER PASSUDAD | |
| ENTER CREDIT CARD NUMBER | |
| ENTER EXPIRATION BATE CONTINUE CONTINUE |] |



SO2 ~ EMAIL - UNREAD MESSAGE

SO4 ~ FILE EDIT VIEW

SO6 ~ SEND REPLY ADDRESS

NOM AND BAD
6/29/00 10:31 am

To: TOE SMITH
SUBJECT: CALL Home

HI Jobe,
Please Call home when you get a chance.
Love,
Mon + Bad

F16. 5

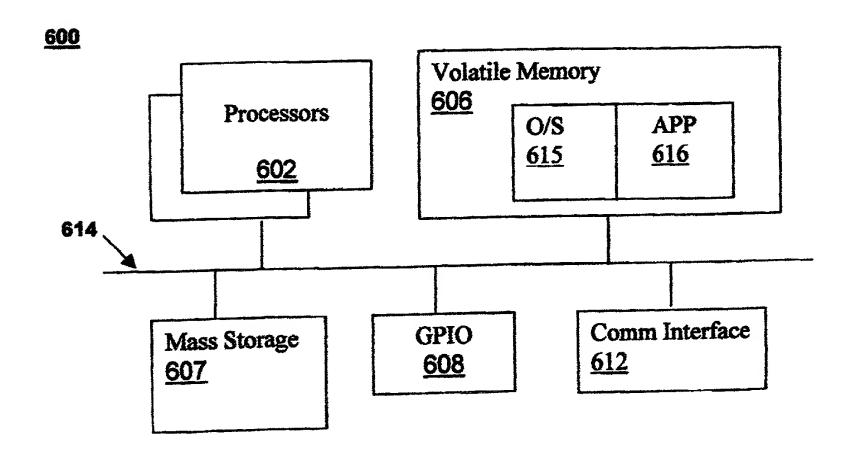


FIG. 6

</Ptt Token>

FIGURE 7

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

Attorney's Docket No.: 51000.P023

the specification of which

My residence, post office address and citizenship are as stated below, next to my name.

I believe I am the original, first, and sole inventor (if only one name is listed below) or an original, first, and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

METHOD AND APPARATUS FOR ESTABLISHING A VOICE CALL BY WAY OF AN ELECTRONIC MAIL MESSAGE

| XX_is attached hereto. | |
|-----------------------------|-----------------|
| was filed on | |
| United States Application | |
| or PCT International Applie | cation Number |
| and was amended on | |
| | (if applicable) |

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment referred to above.

I acknowledge the duty to disclose all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, Section 119(a)-(d), of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

| Prior Foreign Application(s) | | | Claimed | |
|------------------------------|-----------|------------------------|---------|----|
| (Number) | (Country) | (Day/Month/Year Filed) | Yes | No |
| (Number) | (Country) | (Day/Month/Year Filed) | Yes | No |
| (Number) | (Country) | (Day/Month/Year Filed) | Yes | No |

| I hereby claim the benefit und States provisional application | · · | ates Code, Section 119(e) | of any United |
|--|---|---|--|
| (Application Number) | | (Filing Date) | |
| (Application Number) | | (Filing Date) | |
| I hereby claim the benefit und application(s) listed below an application is not disclosed in first paragraph of Title 35, Un all information known to me t Regulations, Section 1.56 wh and the national or PCT inter | d, insofar as the subj the prior United Stat lited States Code, Se o be material to pater lich became available | ect matter of each of the cles application in the mann ction 112, I acknowledge to tability as defined in Title to between the filing date of | laims of this er provided by the he duty to disclose 37, Code of Federal |
| (Application Number) | (Filing Date) | (Status - patented, pen | ding, abandoned) |
| (Application Number) | (Filing Date) | (Status - patented, pen | ding, abandoned) |
| I hereby appoint Aloysius T. Jason K. Klindtworth, Reg. N attorney/agent; with full power transact all business in the P | o. 47,211; Robert T. er of substitution and | Watt, Reg. No. 45,890; as revocation, to prosecute th | my patent is application and to |
| Send correspondence to | Jason K. Klindtworth lame of Attorney or Age | | oup, LLC, 4900 SW |
| Meadows Road, Suite 109, L Jason K. Klindtworth (Name of Attorney or Agent) | | n 97035, and direct telepho | one calls to |
| I hereby declare that all state statements made on informa statements were made with t punishable by fine or impriso Code and that such willful fall patent issued thereon. | tion and belief are be he knowledge that wi nment, or both, unde | lieved to be true; and furth Ilful false statements and t r Section 1001 of Title 18 o | er that these he like so made are of the United States |
| Full Name of Sole/First Inver | ntor: Jeffrey B. Spo | naugle | |
| | | | |
| Residence: | | Citizenship: | |
| | (City, State) | | (Country) |
| Post Office Address: | | | |

| Full Name of Joint/Second | ond Inventor: Kenneth L. K | Keeler | |
|---------------------------|----------------------------|--------------------------|-------------|
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| Residence: | | Citizenshin [,] | |
| | (City, State) | | (Country) |
| Post Office Address: | | | |
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| Full Name of Joint/Thir | d Inventor: Ajit Pendse | | |
| | Anventor. Alt rendse | | |
| Residence: | | Citizanchin: | |
| Troolderioe. | (City, State) | Oluzonstrip: | (Country) |
| Post Office Address: | , , | | (Oodinay) |
| _ | | | |
| | | | |
| | | | |
| Full Name of Joint/Four | | D-4 | |
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| Residence: | (City Chata) | Citizenship: | (O |
| Post Office Address: | (City, State) | | (Country) |
| Fost Office Address. | | | |
| - | | | |
| | | | |
| | Inventor: | | |
| | | Date: | |
| Residence: | | Citizenship: | |
| D 1055 111 | (City, State) | | (Country) |
| Post Office Address: | | | |
| _ | | | |
| | | | |
| Full Name of Joint/Sixth | n Inventor: | | |
| Inventor's Signature: | | | |
| | | | |
| | (City, State) | | (Country) |
| Post Office Address: _ | | | |
| | | | |

Title 37, Code of Federal Regulations, Section 1.56 <u>Duty to Disclose Information Material to Patentability</u>

- A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclosure information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclosure all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The Office encourages applicants to carefully examine:
 - (1) Prior art cited in search reports of a foreign patent office in a counterpart application, and
- (2) The closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.
- (b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made or record in the application, and
- (1) It establishes, by itself or in combination with other information, a prima facie case of unpatentability of a claim; or
 - (2) It refutes, or is inconsistent with, a position the applicant takes in:
 - (i) Opposing an argument of unpatentability relied on by the Office, or
 - (ii) Asserting an argument of patentability.

A prima facie case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

- (c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:
 - (1) Each inventor named in the application;
 - (2) Each attorney or agent who prepares or prosecutes the application; and
- (3) Every other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.
- (d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent, or inventor.